SUPERFUND FACT SHEET

ARKWOOD

UPDATE

September 1989

THIS FACT SHEET HAS INFORMATION ABOUT

- The results from phase I of the remedial investigation (RI)
- Plans for phase II of the RI
- Opportunities for public involvement

INTRODUCTION

The Arkwood Superfund site, located in Boone County southwest of Omaha, Arkansas, was the location of a creosote wood-treating facility for more than 20 years. After **pentachlorophenol** (PCP) was found in **ground water** near the site, the United States Environmental Protection Agency (EPA) proposed in 1985 that the site be added to the **National Priorities List** (NPL) of hazardous waste sites. The site was formally added to the NPL in 1989. Under the terms of an **Administrative Order on Consent**, Mass Merchandisers, Inc. (MMI), operator of the treating facility from 1973 until 1984, is responsible for conducting the **remedial investigation** and **feasibility study** (RI/FS) of the Arkwood site. The purpose of the RI/FS is to determine the nature and extent of contamination at the site and to evaluate alternatives for cleaning up the site. ERM-Southwest, MMI's contractor for the RI/FS, recently completed phase I of the RI. This fact sheet discusses the phase I results and activities planned for phase II. (Words in **boldface** are defined in the glossary inside.)

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U.S. Environmental Protection Agency
1445 Ross Avenue (6H-MC)
Dallas, Texas 75202-2733

Address Correction Requested

6H-M

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THE REMEDIAL INVESTIGATION – PHASE I

Phase I of the RI was completed in June 1989. The objectives were to:

- Summarize and evaluate existing data on the Arkwood site.
- Collect additional data to further characterize the extent and types of chemicals at the site and determine potential pathways for chemical **migration**.
- Provide data that will be used to identify and evaluate any risks posed by the site.
- Collect data that will be used to identify and evaluate possible alternatives for cleaning up the site.

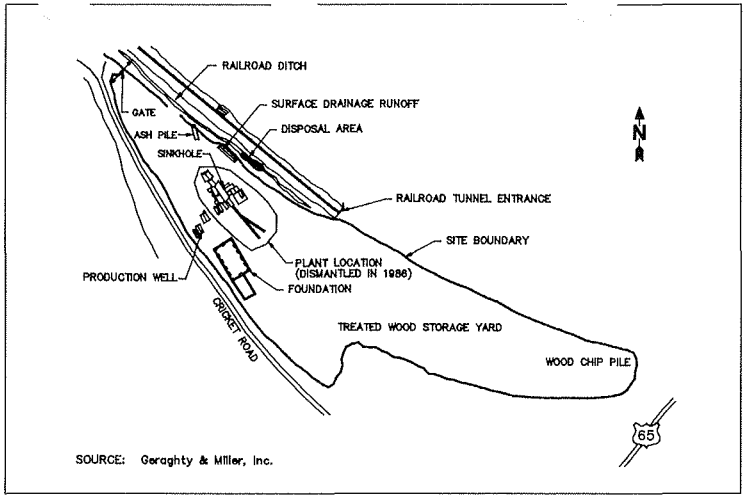
Phase I activities included a subsurface investigation to characterize the geology beneath the site area and extensive sampling to determine the effects of past wood-treating operations on the site and surrounding areas. Samples were collected of area ground water (wells and springs), soil, **sediment**, air, and surface water.

Results of the subsurface investigation and sampling program indicate that ground water flows through fractures in a limestone **aquifer** beneath the site. However, ground water samples from 13 area springs show that only New Cricket Spring has been affected by the Arkwood site. This indicates that ground water flows from the site, through the aquifer, and into the spring.

The sampling program also shows that PCP is the most widespread chemical at the site. PCP was detected in ground water samples from New Cricket Spring at levels ranging from 1.0 to 2.3 parts per million (ppm). PCP was also found in four shallow monitoring wells drilled at the site. However, ground water samples from domestic and municipal wells showed no evidence of contamination by wood-treating compounds.

On-site soil and sediment samples also showed the presence of PCP. Soil samples from the wood storage yard, railroad ditch, and treatment area showed PCP at concentrations approaching 7,000 ppm. The most affected soils in these areas were generally limited to the upper 2 feet of soil, with deeper soils having lower contaminant levels. In addition to PCP, various **polynuclear aromatic hydrocarbons** (PAHs) and trace levels of **chlorinated dibensodioxins** and **dibensofurans** were found in the soil. However, these chemicals occurred less frequently than PCP. Off-site stream sediments showed no significant levels of contamination.

Air and surface water were also sampled during phase I of the RI. The air at the perimeter of the site and upwind and downwind of the site was monitored for contaminants during soil sampling. This monitoring

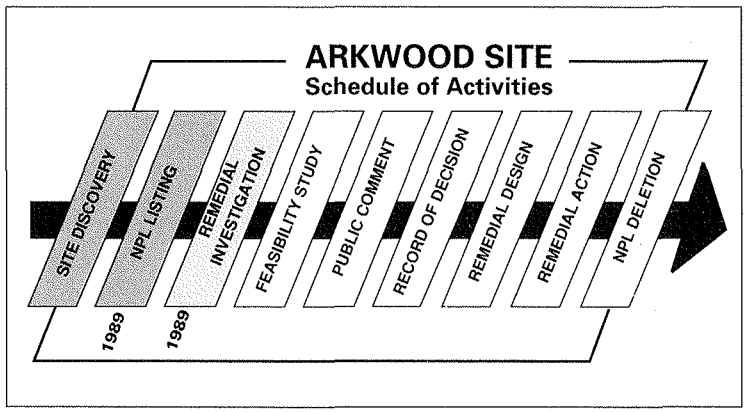


Arkwood Site Map

showed no evidence of airborne hazards. Similarly, surface water samples taken of site runoff, Walnut Creek, and Cricket Creek showed no evidence of contamination.

Finally, phase I of the RI examined areas of the site as possible sources of contamination. These areas included the treatment area, railroad ditch, wood storage yard, and a sinkhole once used for dumping process waste. The results indicate that three primary areas are potential sources of ground water and soil contamination – the near-surface soils in the treatment area, the railroad ditch, and portions of the wood storage yard.

A previous fact sheet reported the possibility of a removal and off-site incineration of the sinkhole materials. After lengthy discussions with EPA and incineration companies, MMI has withdrawn its request for the removal. The contaminants in the sinkhole will be addressed during the final site remediation.



GLOSSARY

Administrative Order on Consent – A legal agreement between U.S. EPA and a party potentially responsible for contamination at a site whereby the party agrees to perform or pay the cost of a site cleanup.

Aquifer – An underground rock formation that can store and supply ground water to wells and springs.

Chlorinated Dibenzodioxins and Dibenzofurans – Compounds formed by partial oxidation (burning) of PCP and other similar chemicals. Known to cause skin problems, these chemicals are generally more toxic than their parent chemicals (including PCP).

Endangerment Assessment – A study to determine the extent to which chemical contaminants found at a site pose a risk to public health and the environment.

Feasibility Study (FS) – See Remedial Investigation/Feasibility Study.

Ground Water – Underground water that fills pores in rock formations to the point of saturation. When ground water accumulates in significant quantities, it may be used as a source of drinking water.

Migration – The process by which substances move from one location to another. This process enables chemicals to travel beyond the original site of contamination.

National Priorities List (NPL) – U.S. EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term cleanup using funds set aside under the Superfund program.

Pentachlorophenol (PCP) – A chemical used in wood-treating operations. Long-term exposure can cause liver and kidney injury in humans and cancer in laboratory animals.

Polynuclear Aromatic Hydrocarbons (PAHs) – A chemical found in mixtures such as tobacco smoke and coal tar; the parent material of creosote. Long-term exposure may lead to certain forms of cancer.

Remedial Investigation/Feasibility Study (RI/FS) – A two-part study of a site that must be completed before cleanup activities begin. The first part is the remedial investigation (RI), which studies the nature and extent of the problem. The second part is the feasibility study (FS), which identifies and evaluates alternative cleanup actions for a site.

Sediment – Material that settles to the bottom of a stream, creek, lake, or other body of water.

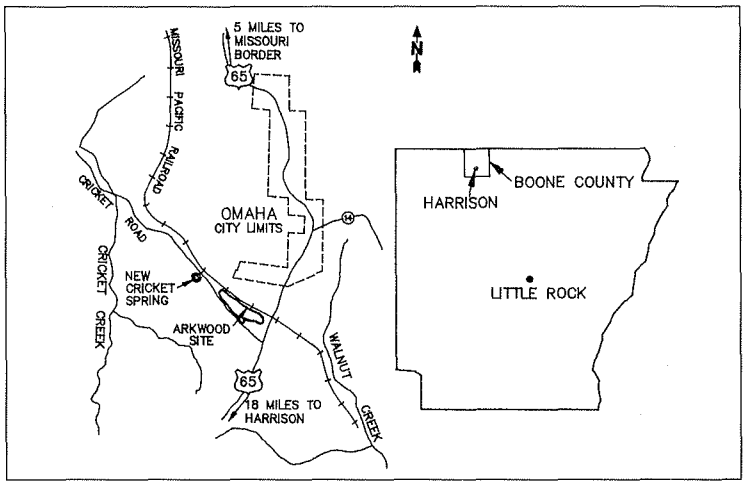
SITE BACKGROUND

The 20-acre Arkwood Superfund site is located in an excavated area about 1,000 feet west of U.S. Highway 65, north of Cricket Road. The site consisted of a millwork shop, a wood-treating plant that used creosote and PCP, and a yard for storing treated wood prior to sale.

The plant site was developed in the early 1900s when a railroad company excavated about 40 to 50 feet below natural grade to obtain fill dirt for a railroad embankment. Arkwood, Inc. began wood-treating operations at the site in the early 1960s. In 1973, the site owner leased the facility to MMI. The facility continued to operate until June 1984, at which time MMI sold or removed its inventory and process materials. The owner dismantled the plant in 1986.

During its operation, the plant generated an estimated 6,000 to 7,000 pounds of waste per year. Wastes from plant operations were reportedly dumped into a sinkhole at the treatment plant until 1970. The sinkhole has since been sealed. In addition, waste oils were placed in a ditch adjacent to the railroad until approximately 1974, when MMI began using a chemical recovery system. Other wastes including liquids used to wash the treatment equipment, were accumulated in a tank and then spread over the wood storage yard to control dust.

The Arkansas Department of Pollution Control and Ecology received a complaint about the site in 1981. Preliminary investigations revealed detectable levels of PCP in area ground water. In 1985, EPA proposed that the site be added to the NPL; the site was formally added in March 1989.



Site Location Map

PLANNED ACTIVITIES FOR PHASE II

Based on the phase I results, several activities are planned for phase II of the RI. These include:

- Collecting additional soil, spring, well, surface water, and site runoff samples
- Evaluating water data to further define source areas and ground water flow
- Collecting flow data from New Cricket Spring

At the completion of phase II, a comprehensive RI report will be written, combining the findings of both phases. These findings will then be used to assess any risks posed by the site **(endangerment assessment)** and identify and evaluate possible alternatives for cleaning up the site **(feasibility study)**.

TECHNICAL ASSISTANCE GRANT AVAILABLE

EPA has introduced a new program that enables groups of interested citizens to obtain assistance in interpreting and understanding data generated during the remedial process. Technical Assistance Grants, or TAGs, provide up to $50,000 to community groups wishing to hire consultants to interpret sampling results, reports, and other documents. Thirty-five percent of the requested funding amount must be matched by the group. For example, if a group requests $50,000, the group must provide an additional $17,500 or obtain it from some other source. The matching funds may be paid by in-kind services and may originate from any non-federal source. TAGs cannot be used to duplicate field or laboratory work. They may be used only to understand or interpret existing documents and site activities.

Municipalities, educational institutions, and other governmental agencies are not eligible to receive TAGs. However, government officials may belong to a community group requesting a TAG.

More information about TAGs is available from U.S. EPA Region 6 in Dallas at (214) 655-2240.

PUBLIC INVOLVEMENT

FOR MORE INFORMATION

Additional information on the Superfund process and Arkwood site, including copies if the RI Phase I report, is available at the EPA office in Dallas and at the information repositories listed below.

Boone County Library
221 West Stephenson Ave.
Harrison, Arkansas
(501) 741-3665

Boone County Court House
County Clerk's Office
Harrison, Arkansas
(501) 741-8428

Omaha Public School Library
Omaha, Arkansas
(501) 426-3366

DO YOU HAVE QUESTIONS?

If you have any questions or concerns about the Arkwood Superfund site, please contact:

Brent Truskowski
Remedial Project Manager
U.S. EPA (6H-EA)
1445 Ross Ave.
Dallas, Texas 75202
(214) 655-6582

Ellen Greeney
Community Relations Coordinator
U.S. EPA (6H-MC)
1445 Ross Ave.
Dallas, Texas 75202
(214) 655-2240

Media questions should be directed to Roger Meacham, EPA Region 6 Press Officer, at (214) 655-2200.